

City Service Area

Environmental and Utility Services



Electrical Reliability Project



Digester Rehabilitation Project

Mission: Provide environmental leadership through policy development, program design and reliable utility services.

Construction of the \$90 million Plant Reliability Improvements Project in the Water Pollution Control Plant (Plant) was completed in October 2007, ten months ahead of schedule. These improvements increased peak flow capacity to 400 million gallons per day. Design of the Electrical Reliability Project to begin addressing the Plant's aging electrical system is currently underway. The total budget for the project is \$80 million. Construction of the Alternative Disinfection System project to replace the use of gaseous chlorine and sulfur dioxide at the Plant is nearing completion. Also, the Plant will begin a multi-year \$87 million Digester Rehabilitation project to rehabilitate and upgrade all 16 Digester Tanks.

The South Bay Water Recycling Program will begin development of an extension of a recycled water transmission line to the Airport and an Advanced Recycled Water Treatment facility adjacent to the Plant. Water Utility System projects in the Adopted CIP include the construction of new facilities, maintenance of existing infrastructure, and improvements to facilities.

The Storm Sewer System Capital Improvement Program continues to implement a strategy to replace or rehabilitate the oldest and least reliable pump stations and storm outfalls. The program is also broadening its scope from enhancing area-wide drainage capacity to addressing the drainage needs in residential neighborhoods, neighborhood business districts, and walking routes to schools and public facilities. A new, high-priority focus will be the comprehensive rehabilitation and upgrading of storm system infrastructure in Alviso.

CSA CAPITAL PROGRAMS

- Sanitary Sewer System Capital Program
- Storm Sewer System Capital Program
- Water Pollution Control Capital Program
- Water Utility System Capital Program

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Recent Accomplishments

- Completed the following projects: Albany-Kiely Phase III, Alma Avenue, Chateau Drive Phase I, Bird Avenue Pump Station, Alma Avenue Pump Station, Hope/Elizabeth Pump Station, Downer-Canoas Injection Station, Willow Street Storm Pump Station, Gold Street (Alviso) Junction Structure Flapgate Replacement, Gold Street Main Relocation, Reservoir Seismic Retrofit, South Bay Water Recycling Program (SBWRP) SJ-11 Zone 3 Reservoir and Pipeline Project, and the SJ-13 SJ/SC Coleman Avenue Connection.
- Completion for the Plant Reliability Improvements Project ten months ahead of schedule.
- Completion of the 60-inch Sewer Replacement Phase 1B, and beneficial use in the 84-inch RCP Rehabilitation Phase V1B project.
- Completion of the North Coyote Valley Water System, including three wells to supply Metcalf Energy Center and other developments.

Program Highlights

Sanitary Sewer System Capital Program

2009-2013 Adopted CIP: \$146.5 million

Neighborhood Sanitary Sewer Rehabilitation Projects:

- Alum Rock Avenue, Julian-Sunol Area, Naglee Avenue, University Avenue, Parkmoor-Meridian and Union/Almaden Oak

Sanitary Sewer Interceptor/Capacity Improvement Projects:

- 30" Old Bayshore Supplement
- 60" Brick Interceptor, Phase VIA and VIB
- Cropley Avenue Sewer Improvement
- Edenvale Sanitary Sewer Supplement, Phases VA and VB

Storm Sewer System Capital Program

2009-2013 Adopted CIP: \$19.4 million

- Albany-Kiely Storm Drainage Improvement, Phases IV and V
- Alviso Storm Rehabilitation
- Chateau Drive Storm Drain Improvement, Phase II
- Creek Channel Stabilization
- Storm Pump Station Rehabilitation and Replacement

Water Pollution Control Capital Program

2009-2013 Adopted CIP: \$320.8 million

- Digester Rehabilitation
- Plant Electrical Reliability
- Development of the Plant Master Plan

Water Utility System Capital Program

2009-2013 Adopted CIP: \$28.2 million

- Nortech Parkway East Loop Main
- Water Valve Rehabilitation
- North First Street Parallel Main

CSA OUTCOMES

(Supported by the Capital Programs)

- ✓ Reliable Utility Infrastructure
- ✓ Healthy Streams, Rivers, Marsh and Bay
- ✓ Safe, Reliable and Sufficient Water Supply

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Performance Measures

A set of consistent and comprehensive performance measurements along with targets and goals have been established for the entire capital program and adopted for each individual CSA. Measures have been established for four key areas: schedule (cycle time); cost, quality; and customer satisfaction. Please see the Budget Guide section narrative for additional information on capital performance measurements.

Outcome: Quality CIP Projects Delivered On-Time and On-Budget

5 Year Strategic Goals		2009-2013 5-yr Goal	2007-2008 1-yr Target	2007-2008 Estimate	2008-2009 1-yr Target	2009-2010 2-yr Target
Environmental and Utility Services CSA delivers quality Capital Improvement Program (CIP) projects on-time and on-budget	1. % of CIP projects delivered* within 2 months of approved baseline schedule	85%	85%	78% (14/18)	85%	85%
	2. % of CIP projects that are completed** within the approved baseline budget	90%	90%	100% (8/8)	90%	90%
	3. % of operations and maintenance divisions rating new or rehabilitated capital facilities as being functional and sustainable after first year of use	80%	80%	TBD***	80%	80%
	4. % of customers rating new or rehabilitated CIP projects as meeting established goals (4 or better based on a scale of 1-5)	85%	85%	85%	85%	85%

Changes to Performance Measures from 2007-2008 Adopted Budget: No

* Projects are considered to be "delivered" when they are available for their intended use.

** Projects are considered to be "completed" when final cost accounting has occurred and the project has been accepted.

*** Survey results are not available at this time.

In 2007-2008, the Environmental and Utility Services CSA delivered an estimated 14 of 18 (78%) projects within two months of the approved baseline schedule, which is below the one-year performance target of 85%. The four projects that did not complete on-time were those that required extended coordination with outside agencies or experienced unforeseen construction related delays.

In 2007-2008, an estimated 100% of accepted projects were completed within their respective baseline budget amounts, which exceeds the one-year performance target of 90%. The CSA continues its effort to improve the cost estimating process in an effort to meet or exceed the performance target. Staff is working to revise the existing Cost Estimating Policy (Council Policy 8-12) with the goal of strengthening the alignment of project scopes, schedules and budgets, while also accounting for external market conditions that may affect the delivery of capital projects. Additional cost tracking and project management tools are being developed through the City's Capital Project Management System (CPMS), which would allow project management staff to effectively track project costs on an ongoing basis and assist in ensuring that expenditures remain within budgeted levels. Instances in which projects do exceed the baseline budget can

Performance Measures (Cont'd.)

be attributed to bidding irregularities, redesign costs and additional staff costs needed to resolve unforeseen construction issues.

The CSA is continuing its efforts to conduct operations, maintenance, and customer satisfaction surveys on completed projects. For each measurement, staff is conducting surveys on a representative sample of projects that are completed during the year. In the case of the operations and maintenance survey measurement, staff is conducting surveys on projects that have been completed and in use for at least one year. Survey results for the operations and maintenance measurement are not available at this time. Preliminary survey results for the customer satisfaction measurements indicate the CSA is delivering projects that meet established goals at targeted levels. Staff is continuing to analyze survey results to determine improvements that could be incorporated into future projects. Staff is also evaluating more effective methods of conducting these surveys, including improvements to the structure and format as well as the use of web-based surveys, which might yield a higher percentage of returned surveys.

Capital Program Summary by City Service Area

Environmental and Utility Services

	2008-2009 Budget	2009-2013 CIP Budget	Total Budget (All Years)	Start Date	End Date
<u>Sanitary Sewer System</u>					
<u>Capital Program</u>					
30" Old Bayshore Rehabilitation		3,450,000	3,450,000	3rd Qtr. 2010	2nd Qtr. 2012
30" Old Bayshore Supplement	3,895,000	4,854,000	4,854,000	3rd Qtr. 2008	2nd Qtr. 2010
60" Brick Interceptor, Phase VIA & VIB	1,684,000	16,982,000	51,230,382	3rd Qtr. 2007	2nd Qtr. 2011
84" RCP Interceptor, Phases VB & VIB	529,000	529,000	8,496,000	3rd Qtr. 2004	4th Qtr. 2008
Almaden Road Supplement Sewer Rehabilitation (North)		2,031,000	2,031,000	3rd Qtr. 2009	2nd Qtr. 2011
Almaden Road Supplement Sewer Rehabilitation (South)		2,333,000	2,333,000	3rd Qtr. 2009	2nd Qtr. 2011
Alum Rock Avenue Sanitary Sewer Rehabilitation	160,000	160,000	1,025,000	3rd Qtr. 2006	4th Qtr. 2008
Blossom Hill Road Supplement		500,000	500,000	3rd Qtr. 2010	2nd Qtr. 2011
Capitol Avenue Sanitary Sewer Improvement		1,675,000	1,675,000	3rd Qtr. 2011	2nd Qtr. 2013
Coleman Road Sanitary Sewer Improvement		2,629,000	2,629,000	3rd Qtr. 2010	2nd Qtr. 2012
Cropley Avenue Sanitary Sewer Improvement		4,529,000	4,529,000	3rd Qtr. 2010	2nd Qtr. 2012
Edenvale Sanitary Sewer Supplement, Phases VA and VB	27,703,000	28,703,000	31,330,000	2nd Qtr. 2001	1st Qtr. 2010
Fee Administration	111,000	596,000	*	Ongoing	Ongoing
Flow Monitoring Program (Master Planning)	3,312,000	7,312,000	*	Ongoing	Ongoing
Fourth Major Interceptor, Phase IIB		3,400,000	3,400,000	3rd Qtr. 2009	2nd Qtr. 2011
Foxworthy Avenue Sanitary Sewer Improvement		2,519,000	2,519,000	3rd Qtr. 2011	2nd Qtr. 2013
Gateway East Sanitary Sewer Improvements Phase II	350,000	350,000	600,000	3rd Qtr. 2007	3rd Qtr. 2008
Geographic Information System (GIS)	149,000	309,000	*	Ongoing	Ongoing
Hydrogen Peroxide Injection Station	110,000	110,000	300,000	3rd Qtr. 2006	4th Qtr. 2008
Inflow and Infiltration Reduction	6,000,000	10,000,000	*	Ongoing	Ongoing
Infrastructure - Sanitary Sewer Condition Assessment	915,000	915,000	915,000	3rd Qtr. 2008	2nd Qtr. 2009
Jacob Avenue Sanitary Sewer Improvement		2,825,000	2,825,000	3rd Qtr. 2012	2nd Qtr. 2013
Julian-Sunol Supplemental Sewer Rehabilitation	314,000	314,000	1,521,000	3rd Qtr. 2007	4th Qtr. 2008
Miscellaneous Projects	2,900,000	6,900,000	*	Ongoing	Ongoing
Miscellaneous Rehabilitation Projects	5,500,000	11,700,000	*	Ongoing	Ongoing
Morrill Avenue/Sierra Road Sanitary Sewer Improvement		2,400,000	2,400,000	3rd Qtr. 2010	2nd Qtr. 2012
Naglee Avenue Sanitary Sewer Replacement	2,518,000	3,149,000	3,149,000	3rd Qtr. 2008	2nd Qtr. 2010
Parkmoor-Meridian Sanitary Sewer Rehabilitation		2,000,000	2,000,000	3rd Qtr. 2012	2nd Qtr. 2013

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	2008-2009 Budget	2009-2013 CIP Budget	Total Budget (All Years)	Start Date	End Date
<u>Sanitary Sewer System</u> (Cont'd.)					
<u>Capital Program</u>					
Payments to West Valley Sanitation District	10,000	50,000	*	Ongoing	Ongoing
Permit Review and Inspection for Outside Agencies	75,000	375,000	*	Ongoing	Ongoing
Preliminary Engineering	700,000	3,125,000	*	Ongoing	Ongoing
Program Management	400,000	2,000,000	*	Ongoing	Ongoing
Public Art	402,000	985,000	*	Ongoing	Ongoing
Public Works Capital Management Costs	1,012,000	5,060,000	*	Ongoing	Ongoing
Public Works Engineering Services Equipment (Materials Lab)	40,000	200,000	*	Ongoing	Ongoing
Rehabilitation of Sanitary Sewer Pump Stations	500,000	500,000	500,000	3rd Qtr. 2008	2nd Qtr. 2009
Spreckles Sanitary Sewer Force Main Supplement	2,849,000	2,909,000	2,909,000	3rd Qtr. 2008	2nd Qtr. 2010
Transfer to the City Hall Debt Service Fund	249,000	1,223,000	1,446,000	N/A	N/A
Union/Almaden Oak Sanitary Sewer Rehabilitation	1,492,000	1,492,000	1,579,000	3rd Qtr. 2007	1st Qtr. 2009
University Avenue Sanitary Sewer Replacement	2,926,000	2,936,000	2,936,000	3rd Qtr. 2008	2nd Qtr. 2010
Willow Glen Sanitary Sewer Rehabilitation	1,205,000	1,205,000	1,317,000	3rd Qtr. 2007	2nd Qtr. 2009
Willow-Union Trunk Sewer	70,000	70,000	1,875,000	3rd Qtr. 2004	2nd Qtr. 2007
Total: Construction/Non-Construction	68,080,000	145,304,000			
Ending Fund Balance	9,109,836	1,207,836	**		
Total: Sanitary Sewer System Capital Program	77,189,836	146,511,836	**		
<u>Storm Sewer System</u>					
<u>Capital Program</u>					
Albany-Kiely Storm Drainage Improvement, Phase III/IV & V	204,000	1,675,000	5,588,000	3rd Qtr. 2008	3rd Qtr. 2011
Alma Storm Drain Improvement	2,058	2,058	1,414,662	N/A	N/A
Alviso Storm Rehabilitation	135,000	1,135,000	2,000,000	3rd Qtr. 2007	2nd Qtr. 2011
Chateau Drive Storm Drain Improvement, Phase II	784,000	784,000	1,491,000	4th Qtr. 2007	2nd Qtr. 2009
City Hall Debt Service Fund	87,000	425,000	502,000	N/A	N/A
Creek Channel Stabilization	600,000	600,000	600,000	3rd Qtr. 2008	2nd Qtr. 2009
Fee Administration	57,000	298,000	*	Ongoing	Ongoing
Geographic Information Systems	458,000	775,000	*	Ongoing	Ongoing

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Environmental and Utility Services

	2008-2009 Budget	2009-2013 CIP Budget	Total Budget (All Years)	Start Date	End Date
<u>Storm Sewer System</u> (Cont'd.)					
<u>Capital Program</u>					
Master Planning	10,000	1,050,000	*	Ongoing	Ongoing
Minor Neighborhood Storm Drain Improvements	280,000	2,185,000	*	Ongoing	Ongoing
Miscellaneous Projects	550,000	2,440,000	*	Ongoing	Ongoing
Outfall Rehabilitation - Capital	84,000	564,000	600,000	2nd Qtr. 2007	2nd Qtr. 2012
Permit Review and Inspection for Outside Agencies	25,000	125,000	*	Ongoing	Ongoing
Preliminary Engineering	83,000	501,000	*	Ongoing	Ongoing
Program Management	83,000	501,000	*	Ongoing	Ongoing
Public Art	69,000	177,000	*	Ongoing	Ongoing
Public Works Capital Management Costs	214,000	1,070,000	*	Ongoing	Ongoing
Rincon Pump Station	1,974	1,974	70,370	N/A	N/A
Rincon Storm System Improvements, Phase II	1,162	1,162	27,104,385	Multi-Phase	Multi-Phase
Ross-Guadalupe Storm Drain Improvements		400,000	400,000	3rd Qtr. 2010	4th Qtr. 2012
Storm Drainage Improvements - Special Corridors	63,000	3,078,000	*	Ongoing	Ongoing
Storm Pump Station Rehab & Replacement	885,000	885,000	*	Ongoing	Ongoing
Storm/Sanitary Sewer Separation		500,000	500,000	3rd Qtr. 2010	2nd Qtr. 2011
Total: Construction/Non-Construction	4,676,194	19,173,194			
Ending Fund Balance	377,499	271,499	**		
Total: Storm Sewer System Capital Program	5,053,693	19,444,693	**		
<u>Water Pollution Control</u>					
<u>Capital Program</u>					
Alternative Disinfection	800,000	800,000	10,375,000	2nd Qtr. 2004	1st Qtr. 2010
Digester Gas Line Replacement	1,100,000	10,100,000	10,100,000	3rd Qtr. 2008	3rd Qtr. 2010
Digester Rehabilitation	16,600,000	46,600,000	86,600,000	3rd Qtr. 2008	4th Qtr. 2018
Dissolved Air Flotation Pressure Retention Tank & Valves		1,100,000	2,388,000	2nd Qtr. 2005	4th Qtr. 2016
Environmental Services Building (ESB) Repair	6,000,000	6,000,000	6,000,000	2nd Qtr. 2008	4th Qtr. 2009
Equipment Replacement	6,430,000	15,460,000	*	Ongoing	Ongoing
Filtration Action Plan - Valve Replacement		8,600,000	8,600,000	3rd Qtr. 2010	4th Qtr. 2013

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	2008-2009 Budget	2009-2013 CIP Budget	Total Budget (All Years)	Start Date	End Date
<u>Water Pollution Control</u> (Cont'd.)					
<u>Capital Program</u>					
Fire Line Replacement		800,000	1,150,000	3rd Qtr. 2006	2nd Qtr. 2012
Payment for Clean Water Financing Authority Trustee	82,000	410,000	*	Ongoing	Ongoing
Plant Electrical Reliability	2,134,000	57,234,000	80,338,000	3rd Qtr. 2008	2nd Qtr. 2015
Plant Infrastructure Improvements	10,830,000	48,318,000	*	Ongoing	Ongoing
Plant Master Plan	2,900,000	7,700,000	10,200,000	3rd Qtr. 2007	1st Qtr. 2011
Public Art	521,000	2,133,000	*	Ongoing	Ongoing
Public Works Capital Management Costs	12,000	60,000	*	Ongoing	Ongoing
Reserve for Equipment Replacement	5,000,000	5,000,000	5,000,000	N/A	N/A
Reserve for Plant Master Plan Improvements		10,000,000	60,000,000	3rd Qtr. 2011	4th Qtr. 2019
Reserve for Rate Studies	200,000	200,000	200,000	N/A	N/A
Revised South Bay Action Plan - SBWR Extension	11,878,000	13,434,000	*	Ongoing	Ongoing
SBWR Reservoir Facility	6,000,000	6,000,000	6,000,000	1st Qtr. 2009	2nd Qtr. 2011
Secondary and Nitrification Clarifier Rehabilitation		12,000,000	32,000,000	3rd Qtr. 2009	4th Qtr. 2018
State Revolving Fund Loan Repayment	4,464,000	22,320,000	87,533,000	3rd Qtr. 1998	2nd Qtr. 2019
Transfer to City Hall Debt Service Fund	42,000	207,000	*	Ongoing	Ongoing
Transfer to Clean Water Financing Authority Debt Service Payment Fund	7,023,000	35,076,000	84,926,000	2nd Qtr. 1996	4th Qtr. 2020
Unanticipated/Critical Repairs	250,000	1,250,000	*	Ongoing	Ongoing
WPCP Reliability Improvements	577,000	577,000	90,502,000	2nd Qtr. 2003	4th Qtr. 2008
WPCP Reliability Improvements Phase II		5,000,000	35,000,000	3rd Qtr. 2012	4th Qtr. 2017
Warehousing Facility Additions		600,000	600,000	3rd Qtr. 2010	2nd Qtr. 2012
Total: Construction/Non-Construction	82,843,000	316,979,000			
Ending Fund Balance	27,052,920	3,838,920	**		
Total: Water Pollution Control Capital Program	109,895,920	320,817,920	**		
<u>Water Utility System</u>					
<u>Capital Program</u>					
Advance System Design	240,000	1,300,000	*	Ongoing	Ongoing

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	2008-2009 Budget	2009-2013 CIP Budget	Total Budget (All Years)	Start Date	End Date
Water Utility System (Cont'd.)					
Capital Program					
Bon Bon Drive Main Replacement		1,000,000	1,000,000	3rd Qtr. 2010	3rd Qtr. 2012
Castleton Drive Main Replacement		900,000	900,000	3rd Qtr. 2009	2nd Qtr. 2011
Gumdrop Drive Main Replacement		100,000	1,330,000	3rd Qtr. 2012	2nd Qtr. 2014
Infrastructure Improvements	440,000	2,400,000	*	Ongoing	Ongoing
Loan Repayment to Sewage Treatment Plant Connection Fee Fund	1,000,000	4,200,000	7,000,000	3rd Qtr. 2004	3rd Qtr. 2013
Major Facilities Fee Administration	15,000	75,000	*	Ongoing	Ongoing
Master Plan Engineering	85,000	470,000	*	Ongoing	Ongoing
Meter Installations	320,000	1,640,000	*	Ongoing	Ongoing
Network System Flow Improvements	5,000	29,000	*	Ongoing	Ongoing
Nortech Parkway East Loop Main	100,000	750,000	750,000	3rd Qtr. 2008	2nd Qtr. 2010
North Coyote Valley Water System	170,000	170,000	8,085,000	2nd Qtr. 2001	3rd Qtr. 2008
North First Street Parallel Main	1,500,000	1,500,000	3,270,000	3rd Qtr. 2008	3rd Qtr. 2009
Norwood Pump Station Replacement	150,000	150,000	1,443,000	3rd Qtr. 2006	3rd Qtr. 2008
Peppermint Drive Main Replacement		1,265,000	1,265,000	1st Qtr. 2012	4th Qtr. 2013
Preliminary Engineering	65,000	375,000	*	Ongoing	Ongoing
Public Art	37,000	123,000	*	Ongoing	Ongoing
Reserve for System Growth Related Projects	1,400,000	1,400,000	1,400,000	N/A	N/A
Reserve for System Rehabilitation/Replacement	1,326,000	2,653,000	2,653,000	N/A	N/A
Security Improvements	190,000	190,000	423,000	3rd Qtr. 2004	3rd Qtr. 2008
Service Installations	410,000	2,150,000	*	Ongoing	Ongoing
System Maintenance/Repairs	520,000	2,800,000	*	Ongoing	Ongoing
Transfer to the City Hall Debt Service Fund	10,000	50,000	63,100	N/A	N/A
Water Valve Rehabilitation	175,000	175,000	659,000	3rd Qtr. 2005	3rd Qtr. 2008
Total: Construction/Non-Construction	8,158,000	25,865,000			
Ending Fund Balance	1,641,526	2,323,526 **			
Total: Water Utility System Capital Program	9,799,526	28,188,526 **			

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	2008-2009 Budget	2009-2013 CIP Budget	Total Budget (All Years)	Start Date	End Date
CSA Total: Construction/Non-Construction	163,757,194	507,321,194	**		
Ending Fund Balance	38,181,781	7,641,781	**		
CSA Total:	201,938,975	514,962,975	**		

* Total Budget information is not provided due to the ongoing nature of this project.

**The 2008-2009 through 2011-2012 Ending Balances are excluded from the FIVE-YEAR TOTAL USE OF FUNDS to avoid the multiple counting of same funds.